[54]	WELL DRILLING APPARATUS AND METHOD		[56] References Cited UNITED STATES PATENTS		
[75]	Inventors:	Robert L. Alvis; Melvin M. Newsom, both of Albuquerque, N. Mex.	2,544,573 3,070,010 3,083,778 3,130,797 3,491,841	4/1963 4/1964	Vincent 175/4.5 Robinson, Jr. 175/4.5 Friedman et al. 175/4.5 Johnson 175/4.5 Robinson 175/4.5
[73]	Assignee:	The United States of America as represented by the United States Energy Research and Development Administration, Washington, D.C.	3,670,828 6/1972 Bennett		
[22]	Filed:	May 3, 1976	Primary Examiner—Ernest R. Purser Assistant Examiner—Richard E. Favreau Attorney, Agent, or Firm—Dean E. Carlson; Dudley W. King; Robert W. Weig		
[21]	Appl. No.:	: 682,806	[57]		ABSTRACT
[52] [51] [58]	U.S. Cl		Well drilling rates may be increased by impelling projectiles to fracture rock formations and drilling with rock drill bits through the projectile fractured rock. 6 Claims, 14 Drawing Figures		

